



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,803	04/20/2001	Adrian Lungu	IM1303 US NA	2560

23906 7590 06/22/2004

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

CHU, JOHN S Y

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,803

Applicant(s)

LUNGU, ADRIAN

Examiner

John S. Chu

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-22 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-22 and 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment and request for interference filed June 23, 2003.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-19, and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over GRINEVICH et al.

The claimed invention is drawn to the following:

A photopolymerizable element for use as a flexographic printing plate comprising:

(a) a support; (b) a photopolymerizable elastomeric layer on the support, comprising a binder, at least one monomer, a photoinitiator, an onium salt and a leuco dye, wherein the onium salt is selected from the group consisting of phosphosponium salts, selenonium salts, triarylselenonium salts, iodonium salts, diaryliodonium salts, sulfonium salts, triarylsulphonium salts, dialkylphenacylsulphonium salts, triarylsulphoxonium salts, aryloxydiarylsulphoxonium salts, dialkylphenacylsulphoxonium salts, and combinations thereof.

GRINEVICH et al discloses a method of producing a color printing plate wherein the photopolymerizable recording layer contains a photopolymerizable monomer, a radical photoinitiator, a color former and a color photoinitiator, wherein a polymeric binder is optionally

Art Unit: 1752

included in the layer, see column 7, lines 11-25. GRINEVICH et al lacks an explicit disclosure for a polymeric binder in an example, however the skilled artisan is clearly motivated to use polymeric binder as an optional additive as suggested by GRINEVICH et al in the citation above. (col. 7, lines 11-25).

Applicants are directed to column 8, lines 7-13 for the disclosure that a leuco dye can be used as the recited color photoinitiators to generate color in the recording material, this meets the recited leuco dye recited in claims 1, 4. Column 9, lines 3-40 recite specific leuco dyes that meet the cyclic lactone as recited in claim 4-6. The onium salts recited in column 8, lines 14-59 meet the claimed onium salt recited in claim 1, and claims 7-10.

It would have been *prima facie* obvious to one of ordinary skill in the art of photopolymerizable elements for the skilled artisan to add a polymeric binder to the photopolymerizable composition as taught by GRINEVICH et al with the reasonable expectation of same or similar results as recited for having a color contrast between the image portions and non-image portions for accurate positioning of the printing plate on the print cylinder.

3. Claims 20-22, and 25-29, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over GRINEVICH et al.

The claimed invention is drawn to the following:

A process for making a flexographic printing plate comprising:

(a) providing a photosensitive element comprising a support and a photopolymerizable elastomeric layer on the support, the photopolymerizable layer comprising a binder, at least one monomer, a photoinitiator, an onium salt and a leuco dye;

(b) imagewise exposing the photopolymerizable layer to actinic radiation forming polymerized portions and unpolymerized portions in the layer; treating the element of (b) to remove the unpolymerized portions and form a relief surface having raised areas; and prior to treating step (c), back flash exposing the photopolymerizable layer through the support to actinic radiation to form a floor that contrasts in color with the raised areas of the relief surface.

Applicants are directed to claim 1, column 13, line 66 – column 14, line 23, in GRINEVICH et al, which recites a method for producing a printing plate from a photosensitive recording element. The method as disclosed in GRINEVICH et al meets all the steps and anticipates the claimed method as recited in claim 20-22 and 25-35. The photopolymerizable recording layer used in the method comprises a photo polymerizable monomer, a radical photoinitiator, a color photoinitiator and a color former as seen in claim 1.

The exposing steps (b), (c) and (d) as recited in claim 1 of GRINEVICH et al meet the claimed steps of (a), (b) and (c) as recited in current application of claims 20 and 21. Likewise the steps (a) – (d) in claim 34 and 35 are met by the process steps of GRINEVICH et al in his claim 1.

As stated above the art of GRINEVICH et al lacks the explicit use of an additional polymer binder as recited in claims 20, however GRINIVECH et al discloses the optional use of a polymeric binder as disclosed in column 7, lines 14-25 which are conventional and common to flexographic printing plates.

It would have been *prima facie* obvious to one of ordinary skill in the art of photopolymerizable compositions used in flexographic printing plates to add a polymeric binder as suggested by GRINIVECH et al with the reasonable expectation of same or similar results as

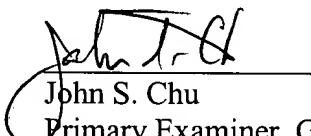
Art Unit: 1752

recited for having a color contrast between the image portions and non-image portions for accurate positioning of the printing plate on the print cylinder.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

The fax phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.


John S. Chu
Primary Examiner, Group 1700

J.Chu
June 18, 2004